TRANSPORTATION

TRANSPORTATION

DOCUMENTS DEPT.

MAR 25 1985

SAN FRANCISCO
PUBLIC LIBRARY

D

REF
388.4097
T6873

AN ELEMENT OF THE MASTER PLAN OF
THE CITY & COUNTY OF SAN FRANCISCO

Bill Owyang, Mu

PCC type streetcars (President's Conference Committee) served San Franciscan's from 1939 until the last r
on September 19, 1982, thus ending 122 years of continuous street rail operation on Market Street.

The preparation and printing of this element has been financed, in part, through a grant from the U. S. Department of Transportation, Urban Mass Transportation Administration, under the Urban Mass Transportation Act of 1964, as amended. The contents of this report do not necessarily reflect the official views or policy of the U. S. Department of Transportation.

SAN FRANCISCO PUBLIC LIBRARY
3 1223 04589 4335

TRANSPORTATION
an element of the
MASTER PLAN

TRANSPORTATION

Department of City Planning
City and County of San Francisco

5/S

DOCUMENTS DEPT.

SAN FRANCISCO
PUBLIC LIBRARY

REFERENCE
BOOK

Not to be taken from the Library

Reprinted January, 1983

The Transportation Element was adopted by Resolution 6834 of the
San Francisco City Planning Commission on April 27, 1972
Amended by Resolution 7543, August 12, 1976 - Harney Way
Amended by Resolution 7644, January 19, 1977 - Northeastern Waterfront Plan
Amended by Resolution 7647, January 20, 1977 - Parking
Amended by Resolution 9434, June 24, 1982 - Transit Streets, Bicycles, Loading

PCC type streetcars (President's Conference Committee) served San Franciscan's from 1939 until the last
on September 19, 1982, thus ending 122 years of continuous street rail operation on Market Street.

The preparation and printing of this element has been financed, in part, through a grant from the U. S. Department of Transportation, Urban Mass Transportation Administration, under the Urban Mass Transportation Act of 1964, as amended. The contents of this report do not necessarily reflect the official views or policy of the U. S. Department of Transportation.

SAN FRANCISCO PUBLIC LIBRARY
3 1223 04589 4335

TRANSPORTATION
an element of the
MASTER PLAN

Department of City Planning
City and County of San Francisco

Reprinted January, 1983

The Transportation Element was adopted by Resolution 6834 of the
San Francisco City Planning Commission on April 27, 1972
Amended by Resolution 7543, August 12, 1976 - Harney Way
Amended by Resolution 7644, January 19, 1977 - Northeastern Waterfront Plan
Amended by Resolution 7647, January 20, 1977 - Parking
Amended by Resolution 9434, June 24, 1982 - Transit Streets, Bicycles, Loading

CONTENTS

INTRODUCTION ■ 3

FUNDAMENTAL ASSUMPTIONS ■ 5

GENERAL OBJECTIVES AND POLICIES ■ 6

MASS TRANSIT PLAN ■ 15

VEHICLE CIRCULATION PLAN ■ 21

PEDESTRIAN CIRCULATION PLAN ■ 23

BICYCLE PLAN ■ 31

DOWNTOWN TRANSPORTATION PLAN ■ 39

CITYWIDE PARKING PLAN ■ 49

INTRODUCTION

The Plan for Transportation is composed of several sections, each of which deals with an important component of the transportation system. The plan sections are (1) the Mass Transit Plan, (2) the Vehicle Circulation Plan, (3) the Pedestrian Circulation Plan, (4) the Bicycle Plan, (5) the Downtown Transportation Plan, and (6) the Citywide Parking Plan. Each consists of objectives and policies regarding a particular segment of the master transportation system and related maps which describe key physical aspects. Since these modal plans are alternative travel systems which often parallel each other, they must be read together to understand the functions assigned to each and their characteristics. Each must also be understood in relation to the other elements of the Comprehensive Plan of the city. The Downtown Transportation Plan isolates downtown San Francisco for special coverage because of the unique problems associated with travel to, from and within the single most important travel destination in the Bay Area.

An overall framework for the separate plan components is provided by the statement of General Objectives and Policies for Transportation, which introduces the Plan. The two general objectives are intended to express desirable goals. They may not always be in harmony. For instance, it may not be possible to satisfy all travel needs in the most convenient manner and at the same time maintain a transportation system which preserves and promotes a desirable living and working environment, supports development in the right locations, and is financially reasonable. Each specific proposal or policy in the separate plans might well be seen as a compromise among these overall objectives and policies, based on weighing the advantages, disadvantages and costs of various alternatives.

REGIONAL TRANSPORTATION POLICIES

- CITY CENTER
- MAJOR REGIONAL HIGHWAY
- MOUNTAINS
- RAPID TRANSIT Interregional and Regional
- REGIONAL AIRPORT

A Major interregional and interstate automobile and truck movements should occur east of the metropolitan area, on the main spine of the Interstate Highway System.

B Regional highways should provide access among parts of the region, generally on the periphery of city centers.

C Intercity and interregional rail and bus terminals, but not airports, should be located in city centers.

D The regional rapid transit system should provide direct access from city centers to other city centers and to all regional airports.

FUNDAMENTAL ASSUMPTIONS

AUTOMOBILE TRAVEL IN THE CITY

The impact of automobile traffic on the San Francisco environment is an undeniable problem. Increasing traffic portends more damage in addition to greater difficulty and inconvenience in traveling by car within the city. A basic assumption of the Transportation Plan is that a desirable living environment and a prosperous business environment cannot be maintained if traffic levels continue to increase without limits. Various methods must be used to control and reshape the impact of automobiles on the city and to use other means of transportation to improve the environment.

One method for controlling automobiles is to limit the capacity of streets and highways, especially those entering the city. Some such limits will be necessary to prevent commuter travel from changing the character of many parts of the city and overburdening local streets.

A second method is to improve transit service in order to make it at least as efficient and comfortable as the private auto, both for commuters and for residents with many kinds of trip purposes. While some people ride transit because they have no alternative, others will ride only if transit is the better way to travel. Within San Francisco, fortunately, the Municipal Railway has maintained a higher level of service than most cities. The approach can be made even more positive by "selling" transit with continuously better service to attract more riders. It is an assumption of this Plan that the convenience and comfort of transit service will have to be increased sufficiently to attract a larger proportion of total travel within the city.

Another method for controlling the total level of automobile traffic, but the least desirable one, is that of accepting congestion in certain circumstances. Congestion signals to travelers that the system is overloaded and that the particular route or time for travel is not an efficient one. At the same time congestion is an implicit control on traffic volumes because it restricts the number of vehicles which can move through a limited space. No one likes congestion; it involves loss of time, inconvenience and frustration. It may also increase pollution and encourage drivers to use residential streets. On the other hand, when a great many people desire to travel at the same time to the same place, it is unavoidable. (This is also true for transit.) Those who can do so should travel at a different time or to a different place. It is assumed that congestion can never be totally eliminated: the costs -- both monetary and environmental -- of providing for potential peak traffic flows would be too high. In addition, in some circumstances congestion must be used to restrict total traffic volumes, particularly during interim periods when transit is being improved or where the cost of providing convenient automobile travel is unacceptable.

Another method of restricting the impact of automobile traffic is to confine major movements to certain routes. It is a principle of the Plan to do this, while providing for convenient automobile movements where they are necessary or desirable.

COMMUTER TRAVEL TO THE CITY

While the resident labor force is increasing, and expectations are for an increase in the ratio of workers per household, San Francisco's continuing growth in employment is anticipated to result in a continuing growth in commuter travel to the city.

Any increase will require expanded transportation, since existing facilities are strained to capacity during the rush hours. The need to provide greatly expanded facilities poses both environmental and financial problems: growth, like everything else, has its costs. This is true, not merely in the case of transportation, but also for a variety of municipal services.

It may be that the city can support only a certain level of employment of nonresidents without unacceptable costs, just as available services and facilities can support only a certain residential population if environmental standards are to be maintained. Transportation planning can be used to guide, shape and control growth itself and should therefore relate to the issue of growth. However, the exact effects of growth in terms of costs and benefits and what should be done to prevent undesirable results are not clearly understood at this time. What is a desirable level of employment is difficult to assess; little is known about the consequences either of allowing unlimited expansion or of attempting

to limit growth. For this reason a consensus on this issue is difficult to achieve. The Plan for Transportation will require changes as knowledge of these factors improves and as public agreement on values is more clearly defined.

The assumption of this Plan is that, until an optimum employment level is determined, the city should assess each new transportation project on the basis of the ability of the transportation system to accommodate additional commuter travel and the impact on the quality of San Francisco's environment. To this end the Plan assumes that all additions to the commuter load as a result of job growth in the city should be accommodated by public transit. Consequently the Plan does not recommend new facilities which would increase the number of cars entering the city. Automobiles cannot be the primary means of commuter travel. Even without further growth in demand, increased transit use is required to alleviate the congestion and undesirable side-effects of commuter travel through the city's neighborhoods.

Rana Ahmadi

RESIDENT TRAVEL DEMAND

Information on current citywide resident travel needs and desires is incomplete, although the Department of Public Works has collected substantial data on specific types of travel. Assumptions as to future demands can, however, be generalized. The chief trend will be an increase in the number of trips by individuals for shopping, recreation, entertainment and other travel not related to employment. Rising incomes and increased leisure time will be the basis for growth in nonwork travel, as in the past. Most of these trips occur during the non-peak hours with destinations outside downtown and even outside the city, both on weekdays and on weekends. Weekend recreational travel, especially, will continue to grow rapidly.

At present from 70 percent to 90 percent of this nonwork travel is by automobile. If this pattern continues, as is likely for some time, automobile traffic during the nonpeak hours and on weekends will increase faster than during peak hours. Although streets built to peak hour capacities link downtown with districts in the city, the same kind of capacity often does not exist for inter-district traffic. As a result, congestion and lengthy travel times may become more serious for crosstown travel than for travel to downtown. It is doubtful that the use of automobiles to satisfy most or all of this travel demand can be accommodated without unacceptable environmental costs and losses in housing and business space necessitated by street widenings or freeway construction. Public transit must be expanded to accommodate this travel need, in addition to the peak-hour commuter function.

FINANCING AND TECHNOLOGY

No radical change in transportation technology is expected in the next decade, although improvements taking advantage of existing industrial techniques, as in BART, will occur. The basic requirements of transportation systems, in terms of network organization, space consumption, power sources and speed, probably will not change. It is still reasonable to plan for systems requiring normal rights-of-way, a choice between private or shared vehicles, electric or gasoline power and normal terminal and collection-distribution requirements.

In the case of finance, federal and state expenditures have weighted transportation decisions at all levels of government too heavily in favor of automobile transportation. The resulting imbalance must now be corrected.

Even with further assistance from federal and state government, San Francisco will have to finance a large portion of transit improvements itself. In some cases new facilities will be made very expensive by the necessity of below-grade construction to protect the environment. It will be esssential to conserve resources by making the best possible use of existing facilities, making the street system serve more functions, making the fullest use of the existing inventory of transit vehicles, and encouraging private enterprise to supplement government action, in the areas of freight delivery systems, ride-sharing, flexible work hours, supplementary transit, public transit financing, pedestrian movement, and parking. It will also be important to assure that nonresidents coming to the city pay their fair share of the costs of facilities provided by the city.

3 1223 04589 4335

S.F. PUBLIC LIBRARY

THE ROLE OF GOVERNMENT

All levels of government have long been involved in transportation planning and development, but this is especially the case at the local level. The city builds and maintains the streets, operates the transit system, builds parking facilities and runs the port and airport. The reason for government involvement and control is that in a fundamental sense all transportation is public: common facilities must be provided.

A division of transportation responsibilities among governments by level and area is possible, but it is beginning to seem less useful to allocate transportation functions by mode or facility among separate agencies within one level of government. In the Bay Area and in San Francisco there are a multiplicity of agencies responsible for various aspects of transportation operations. In the city, responsibities are shared by the Public Utilities Commission, the Department of Public Works, the Police Department, the Airports Commission, the Port Commission, the Parking Authority and the Department of City Planning. Each of these agencies not only has some part of the transportation function but also has many other responsibilities. More coordination is required; reorganization and consolidation of transportation functions would be desirable as a part of a general restructuring and streamlining of city government. Coordination of transportation planning with land use planning and development is especially important.

REF 388.4097 T6873

Rana Ahmadi

Transportation, an
element of the master
1983.

GENERAL OBJECTIVES AND POLICIES

OBJECTIVE 1

MEET THE NEEDS OF ALL RESIDENTS AND VISITORS FOR SAFE, CONVENIENT AND INEXPENSIVE TRAVEL WITHIN SAN FRANCISCO AND BETWEEN THE CITY AND OTHER PARTS OF THE REGION.

The city's first responsibility in the planning and operation of its transportation system is to provide the mobility necessary to its residents in pursuing a wide range of opportunities for work, education, recreation and contact with others. The city must also provide for the many persons who come to San Francisco for work and pleasure and who contribute to the life of San Francisco.

Residents and visitors present a formidable array of demands for transportation services and facilities. Since all transportation facilities must by their nature be shared, at least in part, the transportation system can meet each individual's special needs only to a limited extent. A balance must be struck between the ultimate goal of providing convenient travel for all people to their desired destinations and the costs, both monetary and environmental, that such a transportation system might require.

Policy 1

Involve citizens in planning and developing transportation facilities and services, and in further defining objectives and policies as they relate to district plans and specific projects.

Citizen involvement in all planning is essential. At least three different levels of citizen participation can be recognized in transportation planning. First, citywide participation is required for decisions on citywide problems, policies, and facilities. Almost all major improvements have citywide implications and should be subject to citywide discussion and debate. Second, most citywide facilities have some special impact on a particular part of the city, and therefore on the residents and businesses in that area. Residents should participate actively in the specific design of these facilities, even though some of the basic decisions have been made on a citywide basis. Third, some improvements and changes have only very localized impacts and, in such cases, the residents of the affected area should be more directly involved in planning decisions.

Policy 2

Give priority to public transit as the means of meeting San Francisco's transportation needs, particularly those of commuters.

In order to maintain a desirable living and business environment in San Francisco, the use of mass transit must assume a high priority to ensure mobility for commuters and residents alike. Mobility is ideally provided by a multimodal system, but where a choice must be made to either provide public transit or accommodate the private automobile, public transit should receive the priority.

Improvements or additions to the city's transportation system should involve investment in permanent mass transit facilities and equipment, and street improvements designed to facilitate transit movements. Street improvements designed to facilitate automobile movement should be limited to those that at minimum expense can ensure safe automobile travel.

Policy 3

Coordinate regional and local transportation systems and provide for interline transit transfers.

Transportation facilities are interdependent, and efforts should be made to ensure an efficient system by coordination of local and regional efforts. The regional and local transit systems must be closely linked to provide for transfers. Similarly, regional highways and freeways must be integrated with the local street system. Costly mistakes and service redundancies can be avoided by advance planning and agreement among the many agencies involved in transportation planning affecting San Francisco and the Bay Area.

All transit should provide free transfers

between routes for travel within the city, although fare increments are justified for travel outside the city by BART, ferry or bus. A transfer arrangement should be made among BART. Muni and other systems to allow for transfers from regional to city systems at a reasonable incremental cost.

Policy 4

Ensure choices among modes of travel and give priority to each mode when and where it is most appropriate.

San Francisco and the Bay Area have various means of travel: automobile, bus, streetcar, taxi, cable car, ferry, railroad and BART. Walking and bicycling are used by many people. Flying is occasionally used as a means of intraregional travel. Each mode of travel has special advantages or disadvantages for certain types of trips and for certain origins and destinations. The least costly or most convenient means to satisfy travel demand is not necessarily the best in the context of comprehensive planning: cost or convenience must usually be balanced against effects on the environment and impact on land use and development patterns.

A multimodal transportation system preserves a wider range of choice and satisfies a larger number of people's transportation needs than a single mode. However, there are certain types of trips in the city and region which would favor a single mode: for example, rail rapid transit to serve commuters between the region's three major city centers and the airports. In those instances, priority should be established in accordance with that mode's superiority in satisfying travel needs and other elements of the Comprehensive Plan, including housing, recreation and urban design policies.

Policy 5

Assure expanded mobility for the disadvantaged.

Expansion of opportunities for the poor and the underemployed for work, education and recreation depend to a large extent on the adequacy of the transportation system in serving their needs and on the cost of travel to them. The transportation system must be used in part as a tool for improving the situation of less advantaged residents by providing inexpensive and convenient service to areas of growing employment, as well as to educational institutions, medical services and recreation facilities.

Policy 6

Develop a financing system for transportation in which funds may be allocated without unnecessary restriction for priority improvements according to established policies.

Federal, state and even local financing available for transportation is generally restricted to certain modes of transportation or to certain kinds of improvements. There are funds earmarked for highway improvements, for rapid transit, and for local streets.

Maintenance and development of a multimodal transportation system responsive to changing travel demands requires that funds be available for allocation according to the need for specific projects. To maintain flexibility, taxes and funds should not be restricted to a specific type of improvement for long periods of time.

Policy 7

Seek means to reduce peak travel demands.

Peaking of travel demands during "rush hours" results not only in congested traveling conditions in the morning and evening periods, but in high public costs as well, since it is peak demand that the transportation system is designed to accommodate. Therefore, by spreading work trip arrival and departure times over a longer period the capacity of the system can be used more efficiently. For the city's transit system this means less crowding, shorter loading times, increased reliability of service and ultimately lower operating and capital costs. For the streets and highway system it means less congestion, less automobile emissions and a diminished necessity for high capacity freeways. Administrative devices such as staggering work hours, encouraging shoppers and visitors not to travel during peak hours, altering school hours, and implementing differential bridge tolls would spread the demand over a longer period of time and permit more efficient use of the transportation system.

OBJECTIVE 2

USE THE TRANSPORTATION SYSTEM AS A MEANS FOR GUIDING DEVELOPMENT AND IMPROVING THE ENVIRONMENT.

The use of a transportation system to guide the development and improvement of the city and the region is the necessary

counterpart to its function in providing mobility for residents. Mobility is not itself an ultimate goal; people only travel when there are places to which they want to go and activities in which they want to engage. The transportation system should be used to ensure the preservation or creation of desired activities and facilities. Travel needs cannot be satisfied without consideration of other elements of city life. The modes of transportation used, as well as the location of routes and design of the system, have a large influence on development patterns and the quality of the overall environment. There must be recognition of the system's impact and conscious design and use of transportation improvements to facilitate desirable change and to preserve what is good.

Policy 1

Support and strengthen regional efforts toward a city-centered region through development of the regional rapid transit system.

The development of an extensive network of rapid rail transit linking the major centers of the region is required if a regional, city-centered plan is to be achieved. Care must be taken to locate routes so that the transit system itself will encourage more intensive growth in existing cities or the development of well-planned new cities. Highways should also be located and designed to avoid encouraging scattered, unplanned patterns of growth.

Policy 2

Use transportation improvements in the city as catalysts for desirable development, and coordinate new facilities with public and private development.

Major transportation improvements, such as BART stations in San Francisco, may be expected to generate changes in land uses and developments geared to take advantage of the new access provided. Public and private improvements and developments should be coordinated with transportation projects in advance to ensure that advantage is taken of the opportunities afforded. Transportation improvements should be located and designed to support desirable development or services recommended in other elements of the Comprehensive Plan. Development should be regulated, however, so that it will be compatible with the areas surrounding new stations.

Policy 3

Reduce pollution and noise.

Gasoline-powered automobiles and diesel buses pollute the air and generate substantial noise, in comparison with electric vehicles. The city has long been committed to transit powered by electricity, and this commitment has maintained a high level of environmental quality. The use of automobiles for travel and of motor coaches for mass transit must be limited. Technological changes may be forthcoming which will lower pollution. But until they are available the city should extend its commitment to an electrical transit system. Future city programming should work toward noise tolerance ordinances and other noise control actions, both by administrative and operational means. For instance, where it is not feasible to use the existing electric transit vehicles, diesel buses should be replaced by quieter and less polluting transit vehicles. Another example is the placement of stop signs in relation to topography to avoid substantial noise caused by acceleration and deceleration.

Policy 4

Design and locate facilities to preserve the natural landscape and to protect views.

The Embarcadero Freeway has become for San Franciscans a symbol of insensitivity to the landscape in the design of transportation facilities. Its abrupt termination has become a symbol of San Franciscans' determination to preserve the natural beauty of the city. Care must be taken to ensure that street and transit improvements are made to enhance the beauty of the city and to protect views of the bay, the ocean and the hills.

Policy 5

Organize the transportation system to reinforce community identity, improve linkages among interrelated activities and provide focus for community activities.

The manner in which the transportation system is organized influences patterns of community association and neighborhood physical identity. Transportation decisions may therefore contribute to or undermine social and environmental stability. Through traffic routes should not split neighborhoods or pose insuperable barriers to movement among them. Street design and location of parking

should contribute to the establishment of pedestrian-oriented neighborhood centers where residents may congregate. Major transit routes and specific feeder systems should be located to provide good access to and from neighborhood centers for nearby residents.

Policy 6

Provide incentives for the use of transit, carpools and vanpools, and reduce the need for new or expanded automobile and automobile parking facilities.

The alternatives to expanding automobile facilities are to make existing facilities serve more people and to use other ways of getting people where they want to go. Single occupancy automobile use is incompatible with the need to conserve energy and land, the need to reduce congestion on thoroughfares and the need to reduce auto emissions. Individuals, government agencies and private businesses have a responsibility to find and use ways to travel other than the single occupant private vehicle.

Actions which make transit more convenient, economical and reliable should continue to be a high priority in San Francisco. For those work trips which cannot conveniently be made by transit, carpooling provides efficient use of private vehicles and should be encouraged.

-- Employers should be encouraged to provide incentives for transit use and carpooling by employees. A transit subsidy, such as the provision of a transit "fast-pass", could be an alternative to the provision of free employee parking. Where an employer already has parking spaces available for employees, these spaces could be reserved for those persons who carpool.

-- Institutions should be encouraged to pursue transit alternatives for their employees, visitors and users. Access via existing transit is possible for most major institutions and its use should be encouraged by providing information on routes and schedules to all employees and visitors or clients. Where transit is not available or is inadequate, institutions should explore the possibilities of organizing carpools or commuter subscription buses, providing shuttle buses to major transit routes or advocating adjustments in existing Muni or regional transit to better serve the institution.

-- City government should encourage efficiencies in the use of the transportation system through cooperation with businesses and institutions and the provision of technical assistance in implemention of such programs.

Consideration should be given to providing for the substitution of developer or building owner supplied transit or transit subsidies in lieu of otherwise required parking. The city's taxing power should be used to promote the efficient and appropriate use of the parking supply and to encourage the use of transit and carpooling. For instance, where it is appropriate to promote the use of existing off-street parking spaces for short-term parking, a lower parking tax rate could be imposed on spaces used for less than four hours. Additionally, an in-lieu tax on second and third vehicles might serve to control the number of automobiles in densely populated neighborhoods and encourage the use of transit for work trips.

Rana Ahmadi

CRITERIA FOR MASS TRANSIT PRIORITY

Mass transit should be given priority for the following kinds of trips and/or in the described areas:

1. For work trips generally within San Francisco and other densely developed parts of the region, especially to all major employment centers.

2. For intercity trips between core areas of major cities and for travel to core areas in general.

3. For trips occurring generally during periods of high travel demands.

4. Where demand for travel between any two or more relatively compact or densely developed areas is high.

5. In areas where large numbers of people with limited means or low automobile ownership reside.

6. Where travel demand exceeds the capacity of an area to absorb more vehicular traffic without substantial environmental damage or where further capacity for automobile movement or storage is very costly.

7. Where required or useful to stimulate development.

8. For trips to major recreation areas and to sports, cultural and other heavily attended events.

CRITERIA FOR AUTOMOBILE PRIORITY

Automobiles should be given priority for the following kinds of trips and/or in the described areas:

1. For trips occurring where transit is too inconvenient or not available, and for trips that by their nature are not adaptable to transit.

2. For intraregional trips outside the major cities and for intercity trips between noncore areas of the major cities.

3. For work trips from outlying low-density residential areas to outlying places of employment.

4. Where business travel requires the use of an automobile.

5. In areas having the capacity to absorb additional vehicular traffic without substantial environmental damage or conflict with land uses and where transit would be prohibitively costly in relation to the number of riders served.

CRITERIA FOR PRIORITY FOR WALKING, BICYCLING, OR SHORT-DISTANCE TRANSIT VEHICLES

Walking, bicycling, or short-distance transit vehicles should be given priority for the following kinds of trips and/or in the specified areas:

1. In parks and other recreational areas, and where slow movement, bicycling or walking is part of a recreational experience or necessary to preserve the natural environment.

2. Where concentration of activity is so high that more convenient access among interrelated activities may be achieved by walking or limited distance "people-movers" than by other modes.

3. For short trips between residences and neighborhood convenience shopping and recreational facilities, and for intra-neighborhood visiting and socializing, where walking or neighborhood-oriented, short-distance transit vehicles (such as jitneys) provide a quick and convenient means of travel.

MASS TRANSIT PLAN

OBJECTIVE 1

GIVE FIRST PRIORITY TO IMPROVING TRANSIT SERVICE THROUGHOUT THE CITY, PROVIDING A CONVENIENT AND EFFICIENT SYSTEM AS A FEASIBLE ALTERNATIVE TO AUTOMOBILE USE.

San Francisco has one of the best and most extensive transit systems for a city of its size. Nevertheless, the city should work for an even better system. Without further mass transit improvements, the objectives of the Transportation Plan and of other elements of the Comprehensive Plan cannot be achieved. It is recognized that travelers cannot be diverted from automobiles to transit unless transit provides equal or better service. It is also recognized that consistently high patronage must be obtained to justify the costs of a good transit system. Transit must take the lead in attracting travelers by offering the quality of service desired; one test of the service is the level of patronage achieved, another is its public image.

If residents are to have access by transit to desired destinations, service must be extended to within a reasonable walking distance of their homes. In addition, transfers should be minimal, as the need to transfer is a recognized deterrent to transit usage. In general, one-fourth mile should be the greatest walking distance necessary to reach a transit stop. Where topography makes even this distance too great, the interval should be less.

Policy 1

Improve speed of transit travel and service by giving priority to transit vehicles where conflicts with auto traffic occur, and by establishing a transit preferential streets system.

Transit speed is presently slower than auto speed due to passenger stops and street congestion. If transit speed is to be improved, without reduced convenience of access to transit, conflicts between automobiles and transit must be eliminated as much as possible. Substantial improvement can and should be achieved by giving priority to transit through the use of exclusive lanes and/or by equipping buses and trolleys with devices to trigger lights in their favor at intersections. Other actions should include restricting autos from streetcar and cable car tracks and eliminating automobile turning movements which conflict with transit vehicles.

Policy 2

Intensify overall transit service in the "central area."

That part of the city which is approximately east of Castro-Divisadero and north of Army Street houses half of the population and 80 percent of the city's employment. More travel occurs to and within this area than any other; traffic and pollution levels are highest, and the streets are more congested. It is appropriate to give the highest priority to an intensification and enhancement of transit service within this area. There should be a fine grid of transit routes with frequent service, modified to adapt to topographical conditions and connecting to the rapid transit lines, with special lines and vehicles for shopping, tourist and recreational trips superimposed to provide added service and an especially pleasant form of travel.

Policy 3

Improve interdistrict and intradistrict transit service.

Over 80 percent of Muni transit vehicles provide service to and from downtown because of the enormous demand on the transit system by downtown workers and shoppers, especially during peak hours. However, during nonpeak hours, while travel to downtown for shopping and entertainment is still substantial, there is much more travel between and within districts in the city. Due to increased leisure time and incomes, this is the fastest growing transportation demand.

Policy 4

Keep fares low enough to obtain consistently high patronage and encourage more off-peak use.

Transportation is a public service not unlike street lighting, sewage service or fire protection. Nearly all transportation is subsidized to some degree with public funds. It is no more reasonable to expect transit to "pay its way" with the fare box than it is to

expect streets to pay their way. To charge directly for transit use, where only indirect taxes are imposed on automobile use, discourages transit use.

Where the transit system is not used to its full potential and patronage is lower than it might be, taxpayers are burdened by fixed costs which exceed the benefits provided. Especially during nonpeak hours, the transit system has excess capacity. First priority should be given to encouraging substantially greater patronage for weekday travel between 9:30 a.m. and 3:30 p.m. and between 6:30 p.m. and 6:30 a.m. and for travel on weekends.

Policy 5

Clarify transit routing and establish "transit centers."

A major effort should be made to make clear to residents and visitors the transit services available in San Francisco.

At places of significance to transit, such as transfer points between major routes or points of access to the rapid transit system, "transit centers" should be established. As many routes as possible should go through these centers to facilitate transfers. To help people make better use of the system, complete route information, and where needed, personal assistance, should be provided at transit centers.

Each stop should be clearly identifiable. At transit stops, route information including location of transfer points, should be made available. In addition, each transit vehicle should have complete route information clearly posted.

Policy 6

Maintain a taxi service adequate to meet the needs of the city and to keep fares reasonable.

Taxis serve as an essential supplement to the transit system, not merely for tourists but for many residents and workers in the city who either do not have a car or find regular transit service inconvenient for a particular trip, or both. The elderly often rely on taxis for necessary shopping trips and for reaching medical facilities, as do many others without automobiles when transit is not available. Although taxis should continue to be regulated, competition should be encouraged for improved service and low fares.

Policy 7

Consider possibilities for supplementary privately operated transit services.

For many years privately owned jitneys have operated in the Mission district, modeled on similar service successfully provided in Latin America. In some respects they are a model of a good compromise between the necessary regularity of municipal buses and the on-call and door-to-door service provided by taxis. There are other areas of the city where private operators might find it profitable to provide such service for intradistrict and interdistrict travel, and they should be encouraged to do so.

Policy 8

Establish frequent and convenient transit service to major recreational facilities and provide special service for sports, cultural and other heavily attended events.

Public transit is now provided to major recreational areas (such as Golden Gate Park and the Zoo). Frequent and convenient service will make it much easier for those citizens who do not own cars to reach these areas, encourage people with cars to leave them at home when going to the parks, and reduce congestion in the parks and adjacent neighborhoods. It also is appropriate to promote public transit as the primary mode of transportation to sports, cultural and other heavily attended events.

Fred Stuprich

TRANSIT PREFERENTIAL STREETS PLAN

* ✱ REGIONAL TRANSIT TERMINAL.
* ○ TRANSIT CENTER.
* —— TRANSIT PREFERENTIAL STREET.

TRANSIT PREFERENTIAL STREETS (TPS) ARE BASED ON CRITERIA OF TRANSIT SERVICE DENSITY, AS MEASURED IN TRANSIT VEHICLE AND/OR PASSENGERS PER HOUR AND/OR A TRAFFIC INTERFERENCE CONFLICT AREA. ALL SURFACE RAIL OPERATIONS (CABLE CAR, METRO, AND STREETCARS) ARE DESIGNATED AS TPS BY FACT OF THE DIFFERENT OPERATING CHARACTERISTICS OF RAIL VEHICLES. IN ADDITION, SHORT SEGMENTS OF A FEW BLOCKS ARE DESIGNATED TPS TO CONNECT SEGMENTS FOR SYSTEM CONTINUITY.

THE TRANSIT VEHICLE DENSITY IS BASED ON ALL REGULARLY SCHEDULED PUBLIC TRANSIT OPERATION OVER THE STREET SEGMENT, INCLUDING MUNI, GOLDEN GATE, AND SAMTRANS BUSES. AS TRANSIT SERVICE LEVELS CHANGE, ADDITIONAL STREET SEGMENTS MAY BE CLASSIFIED AS TRANSIT PREFERENTIAL STREETS.

OBJECTIVE 2

DEVELOP TRANSIT AS THE PRIMARY MODE OF TRAVEL TO AND FROM DOWNTOWN AND ALL MAJOR ACTIVITY CENTERS WITHIN THE REGION.

The automobile cannot serve as the primary means of travel to and from downtown. An alternative means of equal convenience and greater efficiency is required, not only to downtown, but also among all major activity centers. While good, direct service is available from almost all parts of the city to downtown so that transit is the dominant means of travel during the rush hours, travel is often slow and vehicles are very crowded during the rush hours. Crowding can never be eliminated completely. However, it is important for continued patronage and rider comfort that trunklines serving outlying districts provide seats for all passengers and that short-term standees be allotted adequate space. Travel to downtown should be possible in less than 30 minutes from all parts of the city. This can be achieved by express buses, exclusive bus lanes, and construction of rapid transit lines such as the Muni Market Street subway.

The use of transit to travel from the suburbs to downtown and other major centers in the city can only become primary over the long run with the development of a good regional transit system connecting downtown to other parts of the region. BART, the first step in the development of this system, should be expanded.

Policy 1

Build and maintain rapid transit lines from downtown to all suburban corridors and major centers of activity in San Francisco.

The city and much of the region should continue to be committed to a transit-first policy with respect to intercity commuter travel. Rapid rail transit probably offers the most competitive service in relation to automobile travel as well as offering the highest capacities possible in transit service. The use of BART or any other line-haul rail system is dependent to a great extent on access to and from stations in outlying residential areas and employment centers. Well-planned suburban feeder systems should be provided.

Growth in air travel requires that city-to-airport travel be provided more efficiently than is possible with automobiles. As the downtown continues to strengthen its position as a financial center and cultural attraction, air travel tied to downtown will grow. The regional rapid transit system should include all regional airports to promote the most efficient use of these facilities and to relieve traffic congestion resulting from air travel growth.

Policy 2

Where significant transit service is provided by buses, bridges and freeways should have exclusive bus lanes.

Transit lines can provide more efficient service by operating on their own rights-of-way. These can be instituted on bridges, freeways and thoroughfares leading into the city, such as on the Golden Gate Bridge and Waldo Grade, and interconnect, where feasible, with a system of exclusive bus lanes or other transit priority street treatments within the city.

Policy 3

Provide transit service from residential areas to major employment centers outside the downtown area.

Reverse commuting to areas other than downtown has increased and places new requirements on the transit system. The city should pursue means of providing this transit for residents where it is not available, such as to the southern peninsula.

The greatest extent residual capacity for reverse commuters is the San Francisco-Oakland corridor. From a public transit convenience aspect, job opportunities in downtown Oakland are as accessible to San Francisco residents as most residents of the East Bay. BART especially has excess reverse commute capacity because, unlike other regional carriers (A/C, GGBHTD, SamTrans, CalTrans/SP), the system does not lend itself to daytime storage of vehicles in San Francisco's Central Business District. Downtown Oakland and downtown San Francisco, given the BART connection, are essentially two ends of one Central Business District separated by 12 minutes and a transit fare.

Other carriers provide significant reverse commute capacity to numerous Bay Area employment centers. However, multiple transfers between different fare systems remains a time and cost barrier to potential transit riders. The promotion of interline transit passes should be supported as well as better coordination of schedules.

Policy 4

Make future rail transit extensions in the city compatible with existing BART or Muni rail lines.

In order to ensure potential linkages, interchange of vehicles and cost savings, new rail rapid transit routes should be of the same basic type as either the BART or Muni systems, depending on the potential link. Other special systems, such as the cable cars or other limited service facilities, need not be identical in character.

Policy 5

Continue ferries and other forms of water-based transportation as an alternative mode of travel between San Francisco and the north bay.

For communities in Marin County, ferry or high-speed water craft offers an alternative means of travel to downtown. Whether bus or rail is the major transit mode to Marin, ferry service should be continued, as it offers an efficient and pleasant way to commute. It also provides a means to reduce weekend and summer automobile congestion in Marin's bayside communities. As ridership and location warrant, water-based transportation should be developed to other locations in the Bay Area.

DESIGN GUIDELINES

TRANSIT ROUTES

Major transit transfer locations called "transit centers" should be highly visible and identifiable; wherever possible, there should be adjacent space for shelter, information, amenities and off-street loading.

Special lighting should be used to identify transit stops.

Lines named for streets, such as the "Clement" bus, should stay on those streets as much as possible.

As many routes as possible should pass through "transit centers."

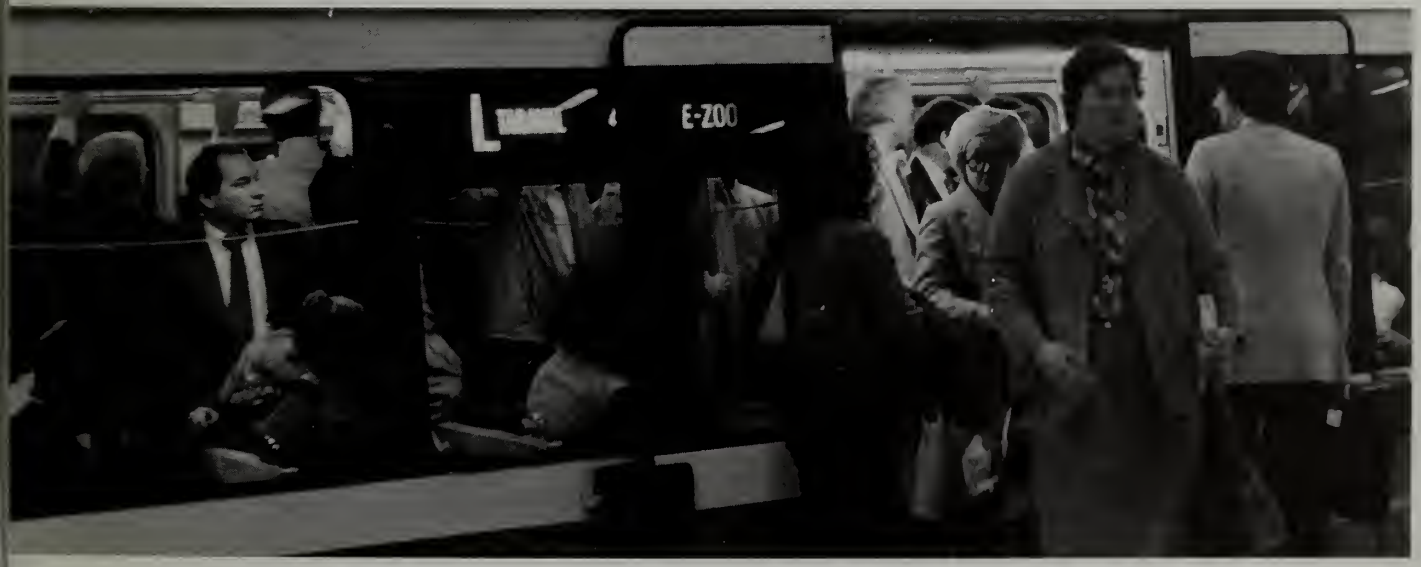
Routes should, to the extent possible, run in straight lines between well-known termini.

Access to all corridors should be available from each BART-Muni Market Street subway station.

Waiting areas should be extended into the parking lane to create a bus loading bulb and vehicle stops made in the right-hand traffic lane on major transit routes.

Graphic symbols and color coding should be used to identify specific transit routes or districts and places served.

Vehicles should be distinctively marked to identify the type of service they offer -- local, express, shuttle, limited-stop.



Fred Stuprich

RAPID TRANSIT PLAN

- RAPID TRANSIT LINE
- SURFACE STREETCAR LINE
- TRANSIT CENTER
- COMBINED BART & MUNI SUBWAY STATION
- MAJOR CROSSTOWN BUS ROUTE

THE FINAL TRANSIT SYSTEM FORM (SUBWAY, SURFACE, OR COMBINA SHOULD BE DETERMINED AFTER A THOROUGH STUDY CONSIDERIN ECONOMIC, SOCIAL AND ENVIRONMENTAL IMPACTS ON THE NEIGH HOODS AND REQUIREMENTS OF TRANSIT TO MARIN COUNTY AND T THIRD STREET CORRIDOR. ALL RAPID TRANSIT LINE ADDITIONS BE THE SUBJECT OF EXTENSIVE TECHNICAL STUDIES AND PUBL HEARINGS, AND ARE CONTINGENT ON THE AVAILABILITY OF RE- SOURCES. THE LONG RANGE TRANSIT AND CIRCULATION REQUIRE- MENTS OF THE CITY INDICATE A NEED FOR FURTHER INVESTMENT TRANSIT TO UPGRADE THE QUALITY, EFFICIENCY AND EQUITY OF SERVICE TO ALL NEIGHBORHOODS.

TRANSIT SYSTEM

CLASSIFICATION OF ELEMENTS

RAPID TRANSIT LINE:

Mass transit operating on an exclusive right-of-way, either below, above or on the surface, without interference from traffic or pedestrians, achieving high speed and high capacity, generally electric vehicles on rails but may be self-propelled electric or combustion engines; regardless of vehicle type, outer portions of lines in low-density areas may leave exclusive right-of-way so that technically those portions of the route are not rapid transit.

LOCAL TRANSIT OR SURFACE TRANSIT:

Mass transit operating with other traffic on city streets, expressways and freeways and subject to interference by other users of the streets, both vehicles and pedestrians; may be electric, gasoline or diesel buses.

SHORT-HAUL TRANSIT, SHUTTLE TRANSIT OR "PEOPLE MOVERS":

Service over short distances (less than two or three miles) intended to move passengers within congested areas and to facilitate access to and from parking, transit and other terminals.

TRUNKLINE:

A rapid transit line or express bus route which serves travel from one area to another area of the city or region, requiring transfer at origin or destination for most passengers to a feeder line.

TRANSIT CENTER:

A major transfer point, usually including a rapid transit station; travelers should be able to travel in many directions from such a place and have information available on city-wide routes.

FEEDER LINE:

Transit service between destinations and stations, trunklines or express bus stops.

TRANSFER POINT:

Any point at which two or more transit lines moving in different directions cross.

TRANSIT PREFERENTIAL STREETS (TPS):

An important street for transit operations where interference with transit vehicles by other traffic should be minimized.

RAPID TRANSIT SYSTEM CRITERIA

Although each rapid transit line will serve a corridor with different populations, activities, topography and travel characteristics, certain basic criteria should be estalished to ensure that the system will perform its necessary function as the major means of travel to downtown and other high activity centers. Each line should meet the following conditions:

- economic and social impacts within the guidelines for development established by other comprehensive plan elements;
- an exclusive right-of-way, with at least the most heavily congested portions of the trip in subway;
- frequent feeder service to rapid transit stations where residents served or destinations are beyond walking distance;
- stations within the city located generally at no greater than half-mile intervals, with some exceptions in low-density areas;
- stations to be located at primary destinations and transfer points;
- average operating speeds, including station stops, between 20 MPH and 30 MPH or approximately twice that of normal surface lines;
- sufficiently high capacity in seating to provide peak hour seated travel for all long-distance travels (15 minutes in travel time or more);
- continuous service at frequent intervals.

These criteria should be taken as guidelines for thd development of rapid transit lines; modifications can be made where necessary to accommodate the line to a particular area.

VEHICLE CIRCULATION PLAN

OBJECTIVE 1

ESTABLISH A THOROUGHFARES SYSTEM IN WHICH THE FUNCTION AND DESIGN OF EACH STREET ARE CONSISTENT WITH THE CHARACTER AND USE OF ADJACENT LAND.

There should be a hierarchical system of streets functioning in accordance with the planned movement of vehicles. Street design, capacity and treatment should be a direct manifestation of the street's intended use in satisfying both present and prospective travel demand, and also its nontraffic purposes such as open space and pedestrian movement. It is recognized that in some cases it will be necessary to determine a maximum level of traffic for which street capacity will be provided, implying a tolerable level of congestion as a constraint, if other objectives of the city are to be attained.

Policy 1

Divert through automobile and truck traffic from residential neighborhoods onto major and secondary thoroughfares, and limit major thoroughfares to nonresidential streets wherever possible.

Major and secondary thoroughfares are to carry traffic among districts in the city. Local streets are intended only to provide access to and from homes and other uses within each neighborhood. To provide more efficiently for long-distance movements and to keep local streets free from heavy traffic, street design and traffic management should ensure the diversion of through traffic around neighborhoods. The Urban Design Plan indicates the application of this policy in more detail and designates "protected residential areas." Heavy truck traffic should be removed from residential streets and confined mainly to freeways and certain very limited nonresidential feeder streets.

Two forms of action are required: provision for through traffic on major thoroughfares and discouragement of it on local streets. To the greatest extent possible land use bordering major thoroughfares should not be primarily residential. The following factors determine the selection of major and secondary thoroughfares:

1. the width of the right-of-way relative to traffic capacity required;
2. the extent of transit use on the street;
3. land uses bordering the street;
4. safety of the street for moderate- and high-speed traffic;
5. the relation of the street to the definition of the neighborhood by its residents;
6. the presence or absence of conflicts caused by driveways, parking, and deliveries to commercial uses.

In order to effectuate the policy to divert through traffic from neighborhoods, it is necessary that increased thoroughfare capacity be balanced by simultaneous reductions on local streets. Appropriate actions will ensure not only that traffic is channeled as intended but also that new usable open space is created and that the residential environment is enhanced.

Policy 2

Design streets for a level of traffic that will not cause a detrimental impact on adjacent land uses.

The need for traffic carriers must be balanced against the adverse effects of heavy traffic on the use of adjacent land and the quality of the environment. The needs of residents for peace and quiet, safety from harm, and useful open space must be given consideration. Each area and each street of the city have different characteristics which determine the level of traffic which can be absorbed without serious adverse impacts. The following factors should be the basis for a judgment on the acceptable levels of traffic on a specific street:

1. the distance between the curb and building line established by sidewalk width or setback;
2. the presence or absence of buffering between street and building in the form of landscaping, change in elevation, or similar condition;

3. the level of pedestrian traffic;

4. the proportion of the street which is residential in land use;

5. whether residences face the street;

6. the presence of hospitals, schools, parks, or similar facilities on or near the street.

The widening of streets at the expense of sidewalks or of setbacks should not occur where space is necessary for pedestrian movement, buffering from noise, useful open space and landscaping. This is especially true in densely populated neighborhoods with little public or private open space. No additional sidewalk narrowings, tow-away zones and one-way streets should be instituted in a residential neighborhood if the intention is to benefit the commuter to the detriment of the resident.

Policy 3

The existing vehicular capacity of the bridges, highways and freeways entering the city should not be increased and should be reduced where possible.

The established policy of limiting access into and through the city by automobiles should be maintained. This policy should work in conjunction with policies calling for the provision of mass transit for commuter travel to San Francisco. It is recognized that provision for further vehicular access into the city would conflict with the environmental objectives of the city, overload the city street system, and jeopardize the city's commitment to mass transit. This policy allows for the introduction of exclusive bus lanes on bridges, highways and freeways where these lanes are compatible with transit systems and will help provide better service.

CLASSIFICATION OF ELEMENTS

FREEWAYS:

Limited access, very high capacity facilities; primary function is to carry intercity traffic; they may, as a result of route location, also serve the secondary function of providing for travel between distant sections in the city.

MAJOR THOROUGHFARES:

Cross-town thoroughfares whose primary function is to link districts within the city and to distribute traffic from and to the freeways; these are routes generally of city-wide significance; of varying capacity depending on the travel demand for the specific direction and adjacent land uses.

SECONDARY THOROUGHFARES:

Primarily intradistrict routes of varying capacity serving as collectors for the major thoroughfares; in some cases supplemental to the major thoroughfare system.

RECREATIONAL STREET:

A special category of street whose major function is to provide for slow pleasure drives, cyclist and pedestrian use; more highly valued for recreational use than for traffic movement. The order of priority for these streets should be to accommodate: 1) pedestrians, hiking trails or wilderness routes, as appropriate; 2) cyclists; 3) equestrians; 4) automobile scenic driving. This should be slow and consistent with the topography and nature of the area. There should be adequate parking outside of natural areas.

COLLECTOR STREETS:

Relatively low-capacity streets serving local distribution functions primarily in large, low-density areas, connecting to major and secondary thoroughfares. To be identified in area plans.

LOCAL STREETS:

All other streets intended for access to abutting residential and other land uses, rather than for through traffic; generally of lowest capacity.

RELATIONSHIP BETWEEN FUNCTION AND PHYSICAL DESIGN: no rigid design standards can be established on the basis of the functional categories established above, although higher capacities will generally be associated with freeways and major thoroughfares. Capacities must be determined on the basis of the level of traffic demand, the space available for traffic and the nature of the surrounding environment.

Policy 4

Discourage nonrecreational and nonlocal travel in and around parks and along the shoreline recreation areas.

Streets in large parks, around small parks and along recreational parts of the shoreline should function primarily for access to recreational facilities and for scenic driving, not as thoroughfares. Heavy or fast traffic endangers pedestrians, cuts off access to recreation and reduces the pleasure of being in parks by causing noise, pollution and visual disharmony. Pedestrian entrances to parks should be at street intersections to the extent possible. Streets adjacent to or within parks and along the shoreline should to the greatest extent possible be designed and controlled to reduce their use as throughways. They should offer opportunities for leisurely, scenic driving consistent with pedestrian, equestrian and bicycle movements along and across the street.

OBJECTIVE 2

PROVIDE FOR CONVENIENT AND SAFE MOVEMENT AMONG DISTRICTS IN THE CITY DURING NORMAL TRAVEL PERIODS.

The primary purpose of those segments of the thoroughfares system designed for inter-district movements is to provide for efficient, convenient and safe travel, integrating the city into a functional whole. At the same time it is recognized that congestion can never be eliminated completely, especially during periods of peak demand. The intent is to provide a convenient vehicular system which functions well in meeting normal traffic demands.

Policy 1

Eliminate unnecessary cross traffic conflicts and improve traffic flow along major thoroughfares.

Excessive numbers of intersections on major thoroughfares reduce the average speed of traffic and encourage use of local streets for through movements. Intersections with local streets should be eliminated where possible to speed the flow of traffic on the arterials intended to carry the bulk of inter-district travel and to reduce accidents. In some cases, where two major thoroughfares meet, it may be necessary to create grade separations to avoid conflicts. However, less costly measures to minimize this conflict should be used wherever possible.

The system of signal-light synchronization and sensors which detect cross-traffic at intersections should be expanded and modified to reduce congestion on major thoroughfares. At the same time, use of regulatory devices within residential areas will discourage through traffic when a good signal system is in effect on the major thoroughfares. Diagonal and perpendicular parking should normally not be allowed on major or secondary thoroughfares. Lane striping, curb cuts and service roads or lanes should provide for driveway access in a manner that will not conflict with through traffic flows.

Policy 2

Promote increased traffic safety, with special attention to hazards that could cause personal injury.

As overall traffic levels increase, the number of accidents also tends to rise. Many accidents occur even where speed of travel is relatively slow. Various measures can be taken to reduce accidents, especially those involving serious personal injury. In some cases redesign of the roadway and of intersections to reduce conflicts between vehicles and pedestrians is required; in others all that is necessary is to improve clarity of signs and of routing so that there is less driver uncertainty and hesitation.

Rana Ahmadi

DESIGN GUIDELINES

MAJOR STREETS

Where residential uses abut on major and secondary thoroughfares, they should be screened visually and physically wherever possible.

A consistent pattern of trees at regular intervals should be used to identify major streets.

Extensive buffers should be used to separate busy thoroughfares from active pedestrian areas.

The brightness (apparent illumination) of street lighting should be greater than on residential streets and the color or hue different from that on residential streets.

Destination information should be concentrated on major streets with signs used to route traffic on the major streets system.

LOCAL RESIDENTIAL STREETS

Excessive traffic speeds and volumes should be restricted and discouraged by every means possible.

Where possible, vehicular access directly to and from local streets should be from other than major thoroughfares, e.g., via a secondary thoroughfare or collector street.

When alternate access is possible, residences should not access to major thoroughfares.

Local streets, other than collectors, should be primarily for access to residences and to serve for emergency vehicles; pedestrian-dominant streets with the maximum feasible amount of street space devoted to environmental amenities desired and needed by the residents.

Residential streets should be well-lighted without being excessively bright.

INTERSECTIONS

Street width, traffic controls, destination and route information and illumination should be maximized at the intersection of two major thoroughfares.

Two intersecting residential streets should have minimal roadway width, wide sidewalks and no change in illumination from that on the streets themselves.

Intersections of residential streets and major thoroughfares should be minimized; where they must intersect, cross and left-turn movements should be limited by curb alignments or medians.

VEHICLE CIRCULATION PLAN

- FREEWAY
- MAJOR THOROUGHFARE
- SECONDARY THOROUGHFARE
- RECREATIONAL STREETS
- Refer to GUIDE TO THOROUGHFARES PLAN and SOUTH BAYSHORE PLAN for Criteria for State Route 230
- Refer to DOWNTOWN TRANSPORTATION PLAN for Details within This Area

GUIDE TO
VEHICLE CIRCULATION PLAN

NOTE: This section refers to the Vehicle Circulation Plan map. Except where indicated no increase in the vehicular capacity of any thoroughfare is intended.

Bay Front Drive
A new recreational drive along the northern shore of the Presidio is proposed to connect Marina Boulevard to Lincoln Boulevard.

Bernal Heights Boulevard
This boulevard should function as a recreational street, with emphasis on pedestrian and bicycle use and with minimal auto capacity.

Cross-over Drive
This connection in Golden Gate Park between Park-Presidio Boulevard and Nineteenth Avenue should be redesigned and realigned as a below-grade roadway. There should be no connection with John F. Kennedy Drive. The design should be limited to a capacity similar to Park-Presidio Boulevard and should be carefully aligned to avoid tree removal.

Doyle Drive
This road should be improved for greater safety; design capacity should be no greater than that of the Golden Gate Bridge less vehicles using Park-Presidio Boulevard.

The Embarcadero
A reconstructed roadway between Washington and North Point Streets is proposed as an attractive landscaped roadway having two moving lanes in each direction, an exclusive transit right-of-way, bicycle lanes and separated access and loading areas at piers in maritime use.

Embarcadero Freeway
The elevated portion between Howard and Broadway and the Washington-Clay and Broadway ramps should be removed as soon as possible.

Franklin Street
If and when Van Ness Avenue is depressed for through traffic, the function of this street between Pine and Lombard should be only for local circulation.

Frederick Street
If Kezar Drive is undergrounded, this street would no longer be required for truck traffic and should be changed to a local street function.

Geary Boulevard
To the extent possible most east-west travel in the Western Addition and Inner Richmond should be channeled onto this street to divert traffic from nearby residential streets. Grade separations at key intersections and improved left-turn connections are desirable.

Gough Street
This street should not be widened or made unidirectional north of Pine Street.

Great Highway
The design capacity of this road should be reduced substantially to correspond with its recreational function; emphasis to be on slow pleasure traffic and safe pedestrian crossings.

Guerrero Street
Although Guerrero, Valencia and Folsom serve as major thoroughfares at the present, the completion of BART to the airport should be accompanied by steps to reduce through traffic and make these streets more compatible with residential uses.

arney Way
idening is proposed to serve Candlestick Park nd new commercial and recreational develop- ent. Refer to South Bayshore Plan.

ohn F. Kennedy Drive
hrough, nonpark traffic on this recreational rive should be eliminated.

ezar Drive
his road should be undergrounded to restore he corner of the park to full recreational se; design capacity no greater than that of he Fell and Oak couple.

larket Street
his street should be no more than four hrough traffic lanes between the Central yway and Castro.

ineteenth Avenue
his heavily trafficked street should ltimately be rebuilt as a parkway with the ame capacity and similar design as Park- residio Boulevard. Simultaneous measures hould be taken to eliminate through traffic n parallel streets.

'Shaughnessy Boulevard
unctionally, this route must provide for rosstown movements; in design, it should emain a scenic-recreational drive, not ntended for heavy traffic.

arnassus Avenue
f the University of California Medical Center ishes to connect its campus on both sides of his street, the University should depress the oadway to maintain a through route for transit nd vehicular traffic.

Pine Street-Bush Street.
When the Richmond rapid transit line is built, priority should be given to reducing capacity and landscaping these residential streets west of Van Ness Avenue.

State Route 230
A surface parkway with two moving lanes in each direction should be constructed along this route, designed to divert truck traffic from Third Street, while serving the major Port facilities, India Basin Redevelopment Area, Hunters Point Shipyard, the new Candlestick Point State Park and Candlestick Park Stadium.

State Route 480
This State Highway Route should be eliminated from the State Highway Plan, and there should be no freeway or other high vehicular capacity, limited access connection between the Golden Gate Bridge and downtown.

Valencia Street
This street should act as a neighborhood collector street as soon as possible after BART begins operations on the Peninsula.

Van Ness Avenue
The possibility of depressing portions or all of Van Ness Avenue from the Central Freeway to Lombard in order to separate through traffic from local circulation should be studied.

PEDESTRIAN CIRCULATION PLAN

OBJECTIVE

PROVIDE SAFE AND PLEASANT SPACE FOR PEDESTRIANS.

Walking is a form of transportation which must be provided for, especially in neighborhoods for short trips to local commercial and public facilities and in business areas where many shoppers congregate. Sidewalks, malls and similar spaces provide not only for pedestrian movement but also for children's play, socializing among residents, window-shopping, and sitting and watching. Congestion occurs on sidewalks in high activity areas, just as it does on streets. Inadequacy of space creates inconveniences for those trying to pass through and those stopping to talk or look or rest.

Policy 1

Widen sidewalks where intensive commercial, recreational, or institutional activity is present and where residential densities are high.

In many high-activity areas of the city such as downtown, Fisherman's Wharf and North Beach, sidewalks are narrower than required for pedestrians. Where pedestrian traffic is high and through vehicular traffic is light or can be moved to alternate routes or reduced by transit improvements, some street space can be made into wider sidewalks, landscaped strips and sitting areas. Through traffic should be discouraged or eliminated to avoid conflicts which inconvenience drivers and pedestrians and may increase accidents. In high-density residential areas with little open space, wider sidewalks and small plazas should be created to provide more usable space as well as to discourage through traffic.

Policy 2

Retain streets not required for traffic for pedestrian circulation, open space use, and density controls.

Proposals for street vacation often arise when a street no longer serves a necessary traffic function. Except in rare cases, street vacations for private ownership or use or for construction of public buildings should not occur where the street could serve as a valuable open space, would improve pedestrian circulation, or maintain control of development density consistent with assumptions underlying land use plans.

Rana Ahmadi

Policy 3

Ensure convenient and safe pedestrian crossings.

Where streets are designed for high volumes or relatively fast movement of vehicles, adequate provision must be made for safe and convenient pedestrian crossings. This is especially important near schools, parks and hospitals, and in high-density residential areas. Wide streets should have adequately timed lights and median strips or islands at intersections to allow safe crossings. If grade separation of pedestrian and vehicular movement is necessary, the roadway should be depressed to maintain continuity of pedestrian paths wherever possible. If a change in pedestrian levels is required, ramps are preferable to stairs.

Policy 4

Partially or wholly close certain streets not required as traffic carriers for pedestrian use or open space.

Some streets in active shopping areas and in residential areas can be closed wholly or partially to vehicular traffic because the streets are not required for vehicular use, except possibly at infrequent intervals or during emergencies. Partial closings can be achieved by substantially narrowing the roadway or by installing temporary barriers during certain periods of the day. Doing so would open up the street for nontraffic uses, without its loss for emergency use or access to homes and businesses. In neighborhood shopping areas provision should be made concurrently for replacement of on-street parking spaces with off-street facilities.

BICYCLE PLAN

OBJECTIVE 1

PROVIDE FOR THE SAFE AND CONVENIENT USE OF THE BICYCLE AS A MEANS OF TRANSPORTATION AND RECREATION.

The bicycle is finding increasing acceptance as a viable alternative to the automobile for work, shopping and recreation purposes. As streets become more congested, some people are finding that they can move about the city and the neighborhoods more quickly, enjoyably and economically on bicycles. Bicycle riding provides health benefits through exercise, reduces noise and air pollution, and helps conserve gasoline. Increased bicycle use is one aspect of the city's energy conservation strategy.

Obstacles to increased individual bicycle use include concerns for safety and lack of knowledge about good routes. On a governmental level, agencies concerned with transportation, land use and traffic law enforcement have often manifested a low level of awareness of bicycles. Often there has been no provision for their use, and little protection for their users' rights. Further institutional constraints involve limited funding resources, and lack of coordination between agencies. The bicycle section of the Transportation Element, in large measure, describes what San Francisco should do to overcome these obstacles and constraints.

Policy 1

Increase the availability of information for commute cycling.

Bicycle commuting to the city's central business district is a small but increasing share of all work-bound trips. With some additional support facilities and encouragement, the volume of such bicycle trips could dramatically increase. Bicycle commute routes are by preference often the same commute routes used for major vehicular access to the downtown. In some cases, the routes also coincide with designated Transit Preferential Streets. The commuting cyclist is generally an adult rider and a repeat user of the same streets. He or she is therefore likely to operate more safely on heavily trafficked streets than the younger or less experienced rider.

A number of improvements can be made to increase safety for commuting cyclists on these streets without directing less experienced cyclists to venture onto them. Funding should be made available to maintain the surfaces of the preferred commute streets at a relatively high standard. The commute streets should not include marking or signing that would encourage use by the inexperienced, primarily recreational cyclist unless these streets also lend themselves to recreational bicycle use. Direct information to commuting cyclists should be primarily in the form of maps. Distribution of such maps should be one aspect of transportation brokering services provided by large employers.

Policy 2

Expand and improve bikeways in accordance with State standards, incorporating the series of passes between hills that are essential to bike travel.

Bikeways are classified as Class I (off roadway paths); Class II (lanes) and Class III (routes). Class I bikeways may require considerable investment, but can often be economically incorporated into other capital projects, such as The Embarcadero and Great Highway reconstruction projects. Class II bikeways involve designation by the Board of Supervisors and include marked lanes and signs every few hundred feet. Class III bikeways share existing roadways with other vehicles and are signed. They require only minimal signing expenditures.

In general, the State advocates that bikeways be placed in close proximity to, rather than on, major streets, for the safety and convenience of the cyclists and motorists alike. However, in San Francisco, Class III bikeways almost always have to be on major streets, since these streets have the most favorable access. The State of California through CalTrans has adopted mandatory planning and design criteria for bikeways, and increments or modifications to the existing 60 miles of San Francisco bikeways must meet these standards as a condition of state or federal funding. Signed bikeways provide a visible means of reinforcing the legitimacy of cyclists' presence, educating other users of thoroughfares and alerting motorists to the possible presence of cyclists.

Bikeways should connect and incorporate waterfront areas of San Francisco, scenic view areas and major parks. Golden Gate Park, in particular, is a prime locale for bicycling. Schools, colleges and hospitals should also be accessible from bikeways. In many cases, bikeways will overlap the preferred commute routes of expert cyclists. The bikeways

should link with other modes of travel, including vans, ferries, and transit and train services that accommodate bicycles. Appropriate information about the bikeways should be made available in the form of easy-to-read maps to city visitors, recreational facility users and students.

Certain additional amenities along bikeway systems such as public restrooms, drinking fountains, rest areas and hostels are welcomed by recreational riders. Where possible, such amenities should be included along recreational routes.

Policy 3

Eliminate hazards on designated bikeways and on commute streets.

Narrow traffic lanes, lack of shoulders, sewer grates with parallel inlets, and certain traffic control devices applied to street surfaces such as speed bumps, present hazards to cyclists. Bad road surfaces, cracks and potholes, and refuse such as glass shards are also hazardous and inhibit use of existing streets by bicyclists. Although hazards involving street dimensions are very difficult to eliminate, as many other hazards as possible should be removed from designated bike routes. Four lane streets which have a very low volume of large vehicles could have the number or width of lanes reduced with a concomitant increase in right lane width for safe bicycle operation.

Policy 4

Accommodate bicycles on regional transit facilities and important regional transportation links.

The opportunity for cyclists to move about the Bay Area with their bikes by using regional transit modes such as BART, the ferry system, the CalTrans Bay Bridge Bicycle Shuttle and trains should be expanded. BART allows bicycles during noncommute hours if riders obtain a nominally priced license. The level of bicycle access permitted by BART is felt to be too limited by bicycle advocates. These transit modes should provide adequate areas for the conveyance of bicycles and should develop related facilities such as lockers. San Francisco should advocate that carrying racks be added to AC Transit, SamTrans, Golden Gate Transit and Greyhound buses and encourage CalTrans to continue to provide locker facilities at intermodal transfer points.

Where there is denial of access to bridges, there should be substitution of other means of access such as the bicycle shuttles used on the Bay Bridge. Alternate access should be the responsibility of the agency prohibiting access. Better coordination of effort between all the transit agencies on bicycle policies and facilities is also needed.

Policy 5

Utilize available bicycle facility funding for projects in San Francisco.

Bicycle transportation funding should be integrated into all appropriate state and federally funded transportation projects, especially those related to safety and mass transit. Funds earmarked specifically for bicycle facilities should be sought out against an identified list of priority projects.

Policy 6

Prevent bicycle accidents through bicycle safety education and improved traffic enforcement related to bicycle use.

Bicyclist education and training should be made available from a wide variety of sources -- to employees as part of transportation brokering services at work sites, to students at schools and colleges, and to new riders through bicycle shops and dealers. Motor vehicle licensing procedures should encompass demonstrated knowledge of laws relating to bicycles.

Traffic enforcement should extend to protection of bicyclists' rights-of-way which are often violated by motorists. Theft prevention and investigation are other areas of law enforcement needing additional effort.

SIGNED BIKEWAYS PLAN

CLASS I, OFF-ROAD, SEPARATE PATH
CLASS II, STRIPED LANES AND SIGNS
CLASS III, ROUTE SIGNS ONLY
▲ AMERICAN YOUTH HOSTEL, BLDG. 240, FORT MASON

SAN FRANCISCO DEPARTMENT OF CITY PLANNING

OBJECTIVE 2

PROVIDE SECURE AND CONVENIENT PARKING FACILITIES FOR BICYCLES.

One of the major deterrents to bicycle use is actual or perceived lack of security for parked bicycles. The popularity of the bicycle, its relatively small size and weight and its simplicity make it very susceptible to theft. Provision of relatively low cost but secure parking parking facilities for bicycles help reduce theft and encourage bicycle use. Adequate parking is crucial to the successful use of bicycles for transportation.

Policy 1

Include facilities for bicycle users in governmental, commercial and residential developments.

Provision should be made for bicycle parking in conjunction with automobile parking in existing and new parking lots and garages. Secure and conveniently located bicycle parking should also be provided in major new construction, such as office buildings, shopping and medical centers and residential complexes, as well as at schools, parks and recreation facilities. Schools, in particular, need to encourage bicycle use through provision of secure parking facilities and safety education for students.

Commercial neighborhood shopping areas present some special opportunities for the creation of bicycle parking facilities, as part of improved street appearance. A merchants' "adopt a bicycle" program could attract bicycling customers. A cooperative approach to liability insurance concerns should be undertaken.

Policy 2

Provide adequate and secure bicycle parking a transit terminals.

Providing adequate and secure bicycl parking facilities at transit terminals i another means of promoting bicycle use b commuters. BART stations and park-and-rid lots, particularly in high-density residentia areas, are good potential locations for suc facilities. Public and private parkin garages should examine the feasibility o designating otherwise unused corners or othe areas for joint bicycle and motorcycl parking, particularly near high-densit employment centers. CalTrans has begun t create and allocate bicycle lockers in suc locations.

The cost of providing adequate and secure bicycle parking is low -- only a fraction of that required for automobiles. This cost can be offset and perhaps recovered by use of coin-operated lockers or racks, or by imposing a charge for supervised parking facilities, although this latter practice is not recommended at transit terminals.

Policy 3

Emphasize security in bicycle parking design.

In terms of adequate parking, bicycles should be able to be locked to permanent, set in concrete metal racks, or stored within locked boxes. Mechanical devices are needed for securing bicycles against theft using frame and two wheel locking and padlock protective hardware. There should be good supervision of the bicycle storage area by building personnel. Further related amenities for cyclists such as showers, lockers and clothes-changing areas should also be considered. The State has recently enacted taxation incentives for bicycle facilities by allowing a rapid three year depreciation.

PREFERRED COMMUTE BIKE ROUTE

THIS MAP WAS COMPILED IN COOPERATION WITH THE SAN FRANCISCO BICYCLE COALITION, THE DEPARTMENT OF PUBLIC WORKS, AND THE CALIFORNIA DEPARTMENT OF TRANSPORTATION, DISTRICT 4.

THE ROUTES, FOR THE MOST PART, ARE UNSIGNED AND NOT RECOMMENDED FOR NOVICE CYCLISTS.

DOWNTOWN TRANSPORTATION PLAN

OBJECTIVE 1

MAINTAIN THE TYPE AND LEVEL OF TRANSPORTATION FACILITIES AND SERVICES APPROPRIATE TO ENHANCE THE ECONOMIC VITALITY OF THE DOWNTOWN BUSINESS AND SHOPPING DISTRICT.

San Francisco is and will continue to be the regional center for finance, corporate and governmental administration, retailing, entertainment and business services related to these sectors of the economy. The transportation requirements of a downtown dominated by these functions, as opposed to others such as manufacturing, are unique. The proper functioning of downtown is dependent upon compactness of development, strength of internal accessibility, and convenient access to downtown from other parts of the region and the world. The Mass Transit Plan recognizes the latter need by calling for rapid transit between downtown, the airports and areas where employees reside. The Downtown Transportation Plan is concerned primarily with the need for proper circulation within downtown for vehicles and pedestrians and with the organization of transit terminals and parking facilities which form part of the downtown-oriented segments of the transportation system.

The density of daytime population in the downtown and the resulting density of trips calls for movement of people to take place in the most efficient and least space-consuming modes of transportation such as public transit. This in turn calls for the maintenance of downtown as an area in which automobile use is controlled. In addition to improvements in the pedestrian system and the pedestrian environment, every effort must be made to insure that better transit service is provided in order that transit increasingly becomes the mode for work and nonwork trips to and within the district. Regional policy and regional transportation funding should recognize San Francisco's unique transportation needs in sustaining its competitive business position as the primary financial and administrative center for the region.

Policy 1

Encourage short-term use of existing parking facilities within and adjacent to the downtown core by converting all day commuter parking to short-term parking in areas of high demand or to car/van pool parking where short-term parking demands are low.

The need for short-term parking (generally, less than four hours) is greatest adjacent to the downtown core for shoppers, visiting businessmen and others who, for various reasons, do not find transit service convenient. Rather than providing new parking facilities, space should be provided in existing facilities by converting long-term spaces to short-term spaces. On the other hand, commuters generally have convenient transit service available and should be discouraged from using these parking facilities by high charges on all-day use. Conversion may also help to relieve rush hour street congestion since short-term parking is generally used by persons traveling during nonrush hours. Parking facilities within and adjacent to the downtown core should provide for vehicles driven by or operated for the physically handicapped.

Policy 2

Provide needed additional short term parking facilities in peripheral locations around but not within the downtown core, adjacent to major thoroughfares, subject to the criteria in Objective 1, Policy 1 of the Citywide Parking Plan.

Within the most densely developed and most intensively used downtown core, highest priority must be given to adequate provision for pedestrian and service vehicle movements. Automobiles should be intercepted at short-term parking facilities located around the core next to major thoroughfares so that uncongested movement and high internal accessibility may be provided within the core. These facilities would be designed as replacements for those on-street spaces preempted by service or pedestrian needs within the core. Frequent transit service and adequate pedestrian-ways should be provided for the final link of these trips.

Policy 3

Discourage the addition of new long-term parking spaces in and around downtown, limit the amount of new spaces to that which cannot reasonably be accommodated by transit and locate long term parking facilities in areas peripheral to the downtown commercial district.

It is desirable to attract as many work related trips as possible from automobiles to other more efficient and less environmentally disruptive modes of transportation. It is not sufficient that those travelling to work drive their automobiles from home to peripheral parking areas and then take transit or walk to places of employment. Current air quality research indicates that most emissions occur at the start and end of auto trips, making automobile pollution more a function of the number of trips taken than the amount of miles travelled. This is well as considerations of energy and land conservation indicate that the entire work trip should be accommodated on the most efficient modes. It is important therefore to provide additional parking only for those who cannot be accommodated on existing or likely future public transit and to limit the location for such parking to the periphery, near major freeways. A basic premise of the Transportation element is that all additions to the commuter load as a result of the job growth in the city should be accommodated by public transit. To this end the city should seek to limit new long-term parking spaces to that amount which will replace long-term parking eliminated elsewhere in the downtown and the Northeastern Waterfront area by conversion to other uses.

Such new facilities in addition to being governed by the criteria set forth of Objective 1, Policy 1 of the Citywide Parking Plan, should:

-- be concentrated in order to make transit service efficient and convenient;

-- provide space for van and car pool vehicles;

-- be structures rather than lots in order to conserve space and minimize displacement;

-- provide shuttle service.

Rana Ahmadi

Policy 4

Encourage firms requiring a large number of vehicles for business purposes to locate outside the downtown commercial district or to locate their vehicle fleets outside the downtown commercial district.

There are some firms which because of the nature of their business must use large numbers of automobiles to reach clients situated at locations throughout the city or the Bay Area. Because of the potentially deterimental impact of such fleets on congested downtown streets carrying large numbers of automobiles, trucks and transit vehicles, firms requiring business fleets should be encouraged to find locations outside the downtown commercial district, or alternatively, to locate their fleet parking in a separate garage outside downtown.

Policy 5

Develop shuttle transit systems to supplement trunk lines for travel within the greater downtown area.

While all parts of the downtown core are within easy walking distance of each other, greater downtown is sufficiently large in area that pedestrian access is not always convenient. Access should be improved with special shuttle systems similar in function to the Shoppers Shuttle buses and the cable cars. Access is particularly important between the Civic Center and the financial and retail districts, and between the Hall of Justice and other areas south and north of Market Street.

Policy 6

Organize and control traffic circulation to reduce congestion in the core caused by through traffic and to channel vehicles into peripheral parking facilities.

Traffic which passes through the downtown core in order to reach other destinations, such as North Beach, the Northern Waterfront, Western Addition, or South of Market should be channeled around the downtown core in order to leave space for pedestrians and vehicles with core destinations. A necessary adjunct to the intercept principle of the downtown parking plan is the control of traffic circulation to provide access to parking facilities and to discourage it beyond them.

Policy 7

Locate drive-in, automobile-oriented quick-stop and other auto-oriented uses on sites outside the office, retail and general commercial districts of downtown.

Drive-in establishments serving customers waiting in motor vehicles and auto-oriented establishments reached primarily by automobile or providing service to automobiles are automobile trip generators. In order to insure that the uses do not aggravate an already congested pedestrian and traffic situation, they should be located away from the most intensely developed downtown areas in locations that do not create conflicts with pedestrian or auto concentrations, designated transit preferential streets or residential units. Therefore, such uses should not be within or directly across the street from those portions of downtown designated for existing and projected office, retail and general commercial uses. However, short-term automotive service providing gasoline appropriately could be made accessory and incidental to the operation of existing or new short-term parking facilities within these areas of downtown, consistent with the criteria of the Citywide Parking Plan.

Policy 8

Develop the downtown core as an automobile control area.

San Francisco's downtown core is an intensely populated area which functions as a financial administrative, shopping and entertainment center. Within this compact area priority must be given to the efficient and pleasant movement of business clients, shoppers and visitors and the movement of goods. A continuing effort should be made to improve pedestrian, transit and service vehicle access and circulation, and these functions must have priority in the use of the limited street and parking space. Therefore, the impact of the private commuter vehicle, in particular, and excessive automobile traffic, in general, must be reduced. Land use development and transportation facilities and services should be coordinated in a manner to maximize efficiency and minimize cost while preserving and strengthening the downtown environment.

OBJECTIVE 2

IMPROVE THE DOWNTOWN PEDESTRIAN CIRCULATION SYSTEM, ESPECIALLY WITHIN THE DOWNTOWN CORE, TO PROVIDE FOR THE COMFORTABLE, SAFE AND CONVENIENT MOVEMENT OF PEDESTRIANS.

Pedestrian use is the primary function of downtown streets, and walking is the primary mode of transportation, particularly in the retailing and financial districts. Sidewalks should be widened at corners and along streets that have high volumes of pedestrian traffic. Obstructions to convenient pedestrian movement and pedestrian conflicts with vehicles should be minimized or eliminated. Some streets should be primarily or exclusively for pedestrian use. Private development should supplement public rights-of-way where appropriate with widened sidewalks, through-block pedestrianways and pedestrian resting and congregating areas.

Policy 1

Provide for sufficient pedestrian movement space.

Where pedestrian volumes in relationship to the needs of other transportation modes so warrant, additional pedestrian capacity can be taken from traffic or parking lanes. At other locations, where appropriate, arcades adjacent to an existing sidewalk may be developed. In areas in which pedestrian volumes are highest, additional parallel through-block pedestrianways may be appropriate where they can provide for convenient links among destinations without encouraging jaywalking. In certain circumstances of high pedestrian volumes and fixed location of some primary destinations, safety considerations may necessitate grade-separated pedestrianways.

Policy 2

Minimize obstructions to through pedestrian movement on sidewalks in the downtown core.

Many conveniences and amenities on downtown sidewalks would be easier to enjoy if properly located to avoid conflict with pedestrian movement. Criteria for location of newspaper vending machines, flower stands and other facilities and amenities such as trees, should take into account the need for adequate space for through movement. Government practices, particularly regarding use of sub-sidewalk space for private purposes, should be changed when they conflict with the ability to minimize obstructions.

Policy 3

Provide for sufficient pedestrian space at corners and major transit stops.

The intersections of streets and sidewalks at corners are areas of particular concern for adequate, unobstructed movement and standing space. Where space currently is inadequate to meet pedestrian needs, existing obstructions should be eliminated and/or additional space created.

Policy 4

Create a pedestrian network in the downtown core area which includes streets devoted to or primarily oriented to pedestrian use.

Based on major pedestrian destinations and use generators, a pedestrian network should be created which minimizes conflicts between pedestrians and vehicular traffic. Such a network should include the closure of streets to private automobiles and/or trucks, at least during those hours when pedestrian volumes and demand are at critical levels. Such a network should also include plazas, arcades, and open spaces as required in major new development. Land uses adjacent to major links in the pedestrian network should be of interest and utility to pedestrians.

CRITERIA FOR DEVELOPMENT OF ARCADES

Arcades may be appropriate for two reasons: (1) they can aid in shaping the building facade (see Downtown Urban Design Policies), and (2) they can provide needed pedestrian space.

Although arcades are generally less desirable than some other methods of providing additional pedestrian movement space, they may be appropriate under certain circumstances and under certain conditions. Arcades are appropriate where they can be continuous and can lead directly to primary destinations for pedestrians.

Essential features:

- o Openness and accessibility
- o Visibility of destination(s)
- o Comfortable width
- o Security
- o Light
- o Protection from wind

SIDEWALK FACILITIES AND AMENITIES

Location of newspaper vending machines should be consolidated outside of corner clear zones on alternate corners, in critical pedestrian flow corridors, or next to a red curb that is not marked as a bus stop.

Flower stands should be relocated, when possible, to corner bulbs or to areas where sidewalks have been widened.

Where flower stands are relocated to corner bulbs, the length of the bulb should be extended to accommodate the stand. These stands should be the only nonessential street furniture allowed within the clear zone and should be placed ten feet back from the property lines at the corner.

Where sidewalk vaults and elevators do not exist, trees should be planted directly in the ground, thus minimizing obstructions to pedestrian flow caused by planter boxes. Where direct in-ground planting is impossible, planter reorganization to building recesses should be undertaken until redevelopment or funding can be made available for removal of sidewalk vaults or sidewalk widening to allow direct in-ground planting.

CLEAR ZONES

Clear zones should be created at corners, extending five feet back from the property lines along each frontage, to facilitate pedestrian movement and to provide for pedestrian reservoir space.

Only items essential to vehicular and pedestrian safety and flow, such as traffic/pedestrian signalization, should be permitted to remain within the clear zones. Mail boxes, police call boxes, fire-pull boxes, newspaper vending machines, pedestrian information signage, etc, should be prohibited. Fire hydrants, street lighting, and other permanent fixtures not required in the clear zone should be removed to locations outside the clear zone when repair or replacement of those items is required, or as funds become available.

CORNER BULBS

Corner sidewalk bulbs should be created where requirements for pedestrian reservoir space is acute and where space can be obtained from existing parking or through traffic lanes.

Corner bulbing provides additional pedestrian queuing space while preserving space for through pedestrian movement. Bulbing also serves to reduce pedestrian crossing distance, thus improving safety and concurrently allowing some channelization of vehicular traffic. The bulb would typically be 15' long and incorporate the corner "Clear Zone".

SIDEWALK EXTENSIONS AT MAJOR TRANSIT STOPS

Where possible, sidewalk width at transit stop locations should be increased without sacrificing through vehicular traffic movement. An effort should be made to provide sheltered reservoir space for transit patron queuing, distinguished from normal pedestrian flow by limited use of bulbing, or uniform use of special paving materials. Buildings adjacent to major transit stops should provide awnings or other convenient shelter for transit patrons.

OBJECTIVE 3

PROVIDE CONVENIENT AND HIGH-CAPACITY LOADING POINTS FOR TRANSIT TRAVELERS.

The number of persons entering downtown for work and for other purposes increases each year. Most people, especially commuters, will come by mass transit of one form or another. The must be accommodated by properly located and designed terminals which permit efficient loading and unloading and easy access to destinations.

Policy 1

Provide for commuter bus loading, if possible, at off-street terminals; where this is not possible, special curbside loading areas should be provided at noncongested locations.

It is ultimately desirable that intercity commuter buses and rail transit be accommodated at specific terminals, as is the case with the Southern Pacific commuter trains and BART stations. Off-street terminals are required in order to provide adequate back-up space for passenger waiting, ticketing and loading. Such terminals also reduce the amount of pedestrian and vehicular congestion on the streets. Until adequate terminals can be provided, commuter buses should load and unload at designated and easily identifiable curbside locations. These locations should be chosen according to levels of pedestrian and traffic congestion caused by other movements, consistent with the provision of convenient transit service.

Policy 2

Make convenient transfers possible by coordinating local and regional transit systems in common or nearby terminals.

One or two new terminals should be developed or an existing one upgraded to accommodate the buses and rail services provided by various regional and local lines. The terminals should be in close proximity to or fully integrated with BART stations and Muni terminals in order to make transfers from one line to another possible by a short walk. Priority should be given to a location or to locations where existing and future intensities of development are highest, as for instance, near the BART Montgomery Street station.

OBJECTIVE 4

IMPROVE FACILITIES FOR FREIGHT DELIVERIES AND BUSINESS SERVICES.

As the downtown grows, the need for adequate facilities for freight deliveries and daily services to businesses will increase. As a result, the conflict between the movement of goods and services and the movement of customers, employees and visitors, whether on foot, by transit, or in private vehicles, will increase.

Policy 1

Require off-street facilities for freight loading and service vehicles in all new developments sufficient to meet the demands generated by the intended uses, and seek opportunities for new facilities for old buildings.

The City Planning Code provides standards for off-street freight loading facilities which should be continually reviewed to determine their adequacy. Since much of the downtown will consist of existing buildings for the foreseeable future, it is also necessary to look for opportunities for improving their off-street facilities.

Policy 2

Discourage access to off-street freight loading and service vehicle facilities from transit preferential streets, or pedestrian-oriented streets and alleys.

Wherever possible, access to off-street loading and service vehicle facilities should be provided from nonpedestrian alleys and minor streets, in preference to transit preferential streets or major arterials, to minimize safety hazards and disruptions to pedestrians and traffic flow. Where many loading and service bays are provided or the number of truck trips is high, conflicts with pedestrians and vehicles should be minimized by provision of a service driveway and maneuvering area which is self-contained within the structure.

Policy 3

Encourage consolidation of freight deliveries and nighttime deliveries to produce greater efficiency and reduce congestion.

Even if there were adequate off-street loading facilities, there would still be conflict between vehicles delivering goods and other vehicular and pedestrian traffic. Deliveries which must be made across the sidewalk from on-street loading spaces disrupt pedestrian movements and increase accident potential. A system of consolidating deliveries to downtown firms should be developed, with emphasis on deliveries during the late evening and early morning periods. Deliveries in the early afternoon when the daytime population of downtown reaches its peak should be discouraged.

Policy 4

Provide limited loading spaces on the street to meet the need for peak period or short-term small deliveries and essential services, with strict enforcement.

On-street loading and stopping spaces will continue to be required to accommodate peak period and short-term demands for small delivery vehicles and essential services. Strict enforcement to restrict these spaces to the vehicles and time limits for which they are intended is essential. In general, workers performing lengthy deliveries or repairs should be required to use off-street parking facilities for their vehicles.

Policy 5

Prohibit sidewalk elevators and sub-sidewalk vaults in new developments, and seek opportunities to remove existing sidewalk vaults and elevators where possible.

Sidewalk vaults and elevators, especially in areas which have high pedestrian volumes, create safety and congestion problems for pedestrians, by making direct in-ground placement of amenities impractical and by creating obstructions to and interruptions to pedestrian traffic flow. When possible, sidewalk delivery elevators should be replaced by off-street loading facilities or by delivery through normal building entrances. Strict enforcement of government policies regarding the use of, and time limitations for, sidewalk elevators is essential, and these policies should be changed to prohibit such use during periods of peak pedestrian traffic.

Policy 6

Require large new hotels to provide off-street passenger loading and unloading of tour buses.

Most major hotels create a large number of tour bus movements as formal sightseeing tours, group travel to airports or convention sites, or collective travel under contract for airline crews. By the nature of these trips, the loading and unloading times for tour buses is long and would cause severe traffic problems if buses were allowed to park or double-park on downtown streets. Consequently, tour bus loading and unloading should be accommodated entirely within the hotel site.

DOWNTOWN TRANSPORTATION PLAN

- TRANSIT PREFERENTIAL STREET
- PRIMARY VEHICULAR STREET
- BART/MUNI STATION (EXISTING).
- MUNI STATION PROPOSED.
- METROPOLITAN TRANSIT TERMINAL
- DOWNTOWN CORE - AUTOMOBILE CONTROL AREA.
- PARKING BELT
- EXCLUSIVE PEDESTRIAN WALKWAY
- PART-TIME PEDESTRIAN STREET
- PEDESTRIAN/SERVICE STREET.
- PEDESTRIAN ORIENTED STREET.
- SHUTTLE TRANSIT

CLASSIFICATION OF ELEMENTS

PRIMARY VEHICULAR STREETS:

Streets functioning as major routes for automobile and truck movements into and out of the downtown area, chiefly to and from the parking belts for automobiles.

TRANSIT PREFERENTIAL STREETS:

Important streets for transit operations where interference with transit vehicles by other traffic should be minimized; based on criteria of transit service density, as measured in transit vehicle and/or passengers per hour and/or a traffic interference conflict area. All surface rail operations (cable car, Metro, and streetcars) are designated as TPS because of the different operating characteristics of rail vehicles. In addition, short segments of a few blocks are designated TPS to connect segments for system continuity.

The transit vehicle density is based on all regularly scheduled public transit operations over the street segment, including Muni, Golden Gate, and SamTrans buses. As transit service levels change, additional street segments may be classified as Transit Preferential Streets.

PARKING BELTS:

Areas appropriate for short-term parking facilities to replace spaces removed from the core area; located and designed to intercept vehicles entering downtown from major thoroughfares before they reach the downtown core automobile control area.

DOWNTOWN CORE

Automobile control area: that intensely populated area which functions as a financial, administrative, shopping and entertainment center where priority must be given to the efficient and pleasant movement of business clients, shoppers and visitors; where a continuing effort should be made to improve pedestrian, transit and service vehicle access and circulation; where priority for the use of the limited street and parking space within this core should be available for these functions; and where a continuing effort should be made to reduce the impact of the private commuter vehicle.

SHUTTLE TRANSIT:

Short-distance, small vehicle transit service for intradowntown movements, especially from the parking belts to the downtown core and among functional areas of downtown.

METROPOLITAN TRANSIT TERMINALS:

Off-street embarkation and debarkation facilities for commuters and other intercity travelers.

PRIMARY PEDESTRIAN NETWORK:

Those streets, alleys and other rights-of-way in the downtown core area where priority in varying degrees should be given to pedestrian use. They have been included in the network on the basis of the following considerations: pedestrian volume; pedestrian flow rates; links between major pedestrian generators; existing small scale street spaces; existing pedestrian-oriented features and amenities (e.g. sitting areas, planters) and public acceptance as pedestrian space.

The types of pedestrian streets and their characteristics are as follows:

1. Exclusive Pedestrian Streets With/Without Cable Cars

   - vehicles prohibited, (emergency vehicles excepted)
   - permanent change of use of public rights-of-way
   - paved-over roadway
   - landscape treatment
   - street furniture
   - food concessions, street vendors etc. permitted

2. Part-Time Exclusive Pedestrian Streets

   - vehicles prohibited at certain hours to free street space for pedestrian use exclusively
   - adjacent land uses are permitted to expand into the public rights-of-way (e.g. restaurants, etc.)

3. Pedestrian/Service Streets

   Because of service needs, cannot be for exclusive pedestrian use for any period of time, but through design can be made into pleasant pedestrian spaces.

   - pedestrian treatment in pedestrian areas only, or in those portions of the vehicle right-of-way which are not needed for service.

4. Pedestrian-Oriented Streets

   Vehicular streets on which design measures to improve mobility and render existing pedestrian space more pleasant and efficient include:

   - removal of obstructions
   - relocation of newspaper vending boxes
   - consolidation of signs, stanchions, etc.
   - sidewalk widening/intersection bulbing
   - restriction of vehicles except for transit
   - special treatments of pedestrian crossing, e.g. brick crosswalks
   - turning restrictions at intersections
   - relocation of transit stops
   - introduction of clear zones at street corners
   - tree planting
   - street furniture where appropriate

CITYWIDE PARKING PLAN

OBJECTIVE 1

ENSURE THAT THE PROVISION OF NEW OR ENLARGED PARKING FACILITIES DOES NOT ADVERSELY AFFECT THE LIVABILITY AND DESIRABILITY OF THE CITY AND ITS VARIOUS NEIGHBORHOODS.

The general theme prevalent throughout the Master Plan and its objectives and policies is that new development must recognize the positive attributes of the city and contribute to their preservation and enhancement and to the overall living environment. New parking facilities should meet these principles because of the impact of a facility upon its immediate physical surroundings and the cumulative traffic generating impacts on the entire city.

Policy 1

Assure that new or enlarged parking facilities meet need, locational and design criteria.

A proposed parking facility should be evaluated as carefully as other proposed additions to the transportation system. Proposed new or enlarged facilities should be reviewed according to Comprehensive Plan policies, and Planning Code criteria for parking facilities. For various special districts and/or where major conflicts occur, the facility should not be developed unless the following criteria are met:

-- There is a demonstrated demand for additional parking space in the surrounding area (in the case of parking facilities open to the public) or resulting from a specific development.

-- All or part of this demand cannot reasonably be diverted to or served by existing transit service or transit which could reasonably be provided in the near future.

-- This demand cannot be met by existing facilities or more efficient use of existing facilities.

-- In the case of desired accessory parking (i.e. parking customarily provided incidental to a permitted use and directly related to the activities conducted on the site of the use) its need is clearly established and not presumed.

-- Provision of the facility does not result in the demolition of sound residential, commercial, and industrial buildings.

-- The traffic generated by the facility will not create a substantial adverse effect on the surrounding city streets (especially residential streets) and corridors leading into the city.

-- The facility, viewed in a citywide context of parking supplied and trips generated will not discourage the possible diversion of current automobile users to transit.

-- The location is appropriate in terms of adjacent land uses.

-- The proposed site and facility are readily accessible from freeway ramps or major thoroughfares.

-- Conflict between pedestrian movements and driveways or ramps is minimized and additional auto traffic through areas of heavy pedestrian concentration is avoided.

-- There is not substantial conflict with existing or future patterns of other forms of transportation, especially transit, and access avoids use of transit preferential streets.

-- Consideration has been given to the inclusion of other uses in order to maximize use of scarce land resources and integrate the structure into the surrounding neighborhood.

-- Access or egress is not primarily from streets or alleys having predominantly residential use.

-- The structure is in scale with existing structures in the area, and when located in commercial districts includes commercial frontage in order to avoid blank street level facades.

-- The design and operating policy of the facility is such that vehicles can be admitted rapidly, to avoid the use of the street as a waiting area for entrance into the facility and to avoid the situation of automobiles idling for a long period of time.

-- Provision has been made where appropriate for parking of vehicles driven by or operated for the physically handicapped.

-- A portion of spaces is reserved for compact automobiles.

-- Secure, convenient bicycle parking is provided.

-- All or portions of the facility are convertible to other uses if demand for parking is reduced in the future.

Policy 2

Discourage the proliferation of surface parking as an interim land use, particularly where sound residential, commercial or industrial buildings would be demolished pending other development.

As an integral part of the transportation system, the location of any parking supply must be evaluated in like terms to the location of any roadway or transit line. If a "temporary" parking lot does not meet the criteria for location of parking facilities, it may have a disruptive effect on the transportation system similar to a major street reconstruction and resultant detour or to temporary suspension of transit service.

The scattered locations of parking lots militate against the possible provision of shuttle transit. In addition, where parking lots are temporary uses on land in the development process, autos are attracted to areas that are already impacted, or worse, where auto use conflicts with transit routes. Such temporary parking also tends to create a travel pattern based on expected availability of parking, which creates even greater difficulties whenever such a temporary facility is eventually terminated.

Surface parking as a temporary use pending some more intensive use of the property may be particularly undesirable when it results in the demolition of needed housing or inexpensive industrial space suitable for "incubator" industry.

Policy 3

Restrict long term automobile parking at rapid transit stations in the city in favor of development of effective feeder bus service.

All of the rapid transit stations in San Francisco are located in densely developed downtown areas or in residential or shopping areas where additional automobile impacts are undesirable. These stations are located in such a manner that they may generally be reached by San Francisco residents either by connecting transit or by walking. The commuter use of the automobile to reach a rapid transit station should be discouraged. Parking impacts which have occurred around outlying stations may be lessened by provision of long-term facilities, however, long-term parking facilities are undesirable because such facilities would be disruptive to the neighborhoods where they would be located. Access to BART should generally be provided by transit.

Policy 4

In any large development, allocate a portion of the off-street parking spaces for compact automobiles.

The trend toward smaller, more fuel efficient vehicles can be reflected and encouraged in new development with a concurrent savings in the amount of land and space required for the parking of automobiles. The provision of parking spaces for compact and subcompact automobiles and motorcycles should be commensurate with their proportion of the city's vehicle population.

Policy 5

Make existing and new accessory parking available to the general public for use as short-term or evening parking when not being utilized by the business or institution to which it is accessory.

A major reservoir of parking spaces, accessory to particular businesses or institutions, is currently in use only during the daytime working hours of those particular businesses and remains vacant and inaccessible at other times. In many instances this space could be used in the evening by residents of the immediate neighborhood or their guests. Also, businesses or new developments with evening, night or weekend users could share the existing accessory parking of nearby weekday businesses.

Policy 6

Limit parking facilities over the water, and near the water's edge where such parking interferes with public access.

In order to improve physical and visual access to the Bay, nonmaritime parking should

be located inland away from the water's edge and away from areas of intense pedestrian activity. Where possible, existing parking facilities on or near the water's edge should be removed or relocated.

OBJECTIVE 2

CONTAIN AND LESSEN THE TRAFFIC AND PARKING IMPACT OF INSTITUTIONS ON SURROUNDING RESIDENTIAL AREAS.

Institutions such as medical centers and colleges are major employment centers and are usually located in the city's residential areas. Employment levels in medical and other health services are expected to increase significantly in the future. Many of these institutions already have physical expansions planned, and the employment levels projected indicate that institutions will have even greater traffic and parking impacts on residential areas unless strong efforts are made to accommodate the employment growth by transit. Alternatives to expansion of institutions on site may have to be explored where significant traffic and parking impacts on surrounding residential areas cannot be avoided.

Policy 1

Limit the provision of long-term parking facilities at institutions and encourage such institutions to regulate existing facilities to assure use by short-term clients and visitors.

Although there are some trips to institutions which are appropriately made by automobile, especially for medical appointments and hospital visits, work trips should be made by transit wherever possible. Institutions should take effective measures to reduce the amount of traffic and parking generated by the development and should develop and implement transit action plans accordingly. New parking provided by institutions should be carefully designed to favor short-term or carpool parking for trips which cannot reasonably be made on transit.

In some cases where institutions have parking facilities where a high short-term fee is charged, visitors seek parking on adjacent streets rather than pay the fee. In order to insure that the facilities rather than the street are used, institutions should price short-term parking low enough to encourage short-term visitor use.

OBJECTIVE 3

RELATE THE AMOUNT OF PARKING IN RESIDENTIAL AREAS TO THE CAPACITY OF THE CITY'S STREET SYSTEM AND LAND USE PATTERNS.

The continuing level of vehicle ownership by city residents indicates the need for parking facilities is continuing and raises serious questions about the level of automobile ownership which can be supported by the street and parking system. Since much of the city's housing, especially in the more densely developed areas, was built prior to the time when the automobile became the dominant mode of travel, off-street parking spaces do not exist in adequate numbers. The size of many streets and the need to provide free flows for traffic limits the number of on-street spaces. Increased parking facilities, especially off the street, need to be made available. However, just as the street system cannot accommodate all potential traffic, so the city cannot provide for an unlimited level of automobile storage. A reasonable level must be provided for and measures must be taken to discourage vehicle accumulations beyond that level.

Policy 1

Regulate off-street parking in new housing so as to guarantee needed spaces without requiring excesses. Encourage low auto ownership in neighborhoods that are well served by transit and are convenient to neighborhood shopping.

Some neighborhoods have large numbers of persons using transit to go to work and have significant numbers of no-auto or one-auto households. This pattern should be encouraged and reflected in off-street residential parking requirements.

Use of common parking facilities for several buildings should be encouraged where existing buildings can be used for this purpose in nearby commercial areas. There may be a place for public provision and leasing of long-term resident parking in already developed high-density neighborhoods.

Policy 2

Use existing street space to increase residential parking where off-street facilities are inadequate.

Local streets are of such width in many areas that improved parking conditions can be obtained by shifting from parallel to diagonal or perpendicular parking without a major investment. This policy has long been followed on steep hills for safety reasons and can be applied where streets are flat in order to maximize the use of existing street space. Care must be taken, however, to ensure that the street is more than a parking lot. Proper landscaping is required to prevent lights from shining into dwellings at night and breaks in rows of cars should be provided to avoid the monotony and unsightliness of unending rows of vehicles.

There is a limit to the number of automobiles the city can accommodate, either moving or in place, especially in the densely populated neighborhoods. The possibility of a new, higher tax on second and third cars and stricter enforcement of on-street parking regulations should be explored.

Policy 3

Protect residential neighborhoods from the parking impacts of nearby traffic generators.

Residents should be given preference in the use of residential neighborhood on-street parking spaces where traffic congestion and parking shortages generated by schools, shopping districts, recreational facilities or rapid transit stations have contributed to the deterioration of residential environment. The preferential parking concept may provide relief for such residential neighborhoods by instituting a regulatory scheme which would reduce parking congestion in residential neighborhoods caused by long-term non-residential parkers, facilitate residents' access to on-street parking close to their homes, provide for access to convenient parking by vistors of neighborhood residents and allow convenient parking for vehicles being used by people providing essential services to neighborhood residents.

OBJECTIVE 4

MEET SHORT-TERM PARKING NEEDS IN NEIGHBORHOOD SHOPPING DISTRICTS CONSISTENT WITH PRESERVATION OF A DESIRABLE ENVIRONMENT FOR PEDESTRIANS AND RESIDENTS.

Although a primary goal is to encourage improved transit service to shopping areas, and the emphasis should continue on transit as the means to travel to shopping districts, automobile use is often necessary for shopping trips involving the purchase of bulky items such as groceries or where there are many stops to be made at different places far apart. Where additional short-term parking is demonstrated to be needed and essential to a shopping district, it should be provided at the least economic and environmental cost to the neighborhood and the city.

Policy 1

Assure that new neighborhood shopping district parking facilities and other auto-oriented uses meet established guidelines.

Some neighborhood shopping facilities serve only residents of the immediately surrounding areas, most of whom travel on foot. Others tend to attract consumers from adjacent communities or in low-density parts of the city from a distance not easily traversable on foot.

Proposed new parking facilities should be carefully considered not only in terms of how much demand they can satisfy, but also in terms of the impact of that facility on the environment of the shopping district. A poorly designed or located facility could be worse for a shopping district than no facility at all. In addition to the criteria for new parking facilities in Objective 1, Policy 1, the following guidelines should be considered in the review of proposed new facilities.

-- Facilities should be located to provide convenient access to desired shopping destinations. However, they should be located in such a manner that they lessen the amount of traffic traveling through the district and do not disrupt the continuity of the shopping district.

-- Multiple use of parking structures and lots should be provided wherever feasible. The use of roof tops of garage structures as game/play areas in densely populated neighborhoods, use of surface parking lots as tennis courts or soccer fields on days when the shopping districts are closed, or use of the facilities for resident parking in the evening are all possibilities which should be considered.

Bill Owyang, Muni

Muni Metro LRVs (Light Rail Vehicles) began revenue service in the new Metro Subway under Market Street on February 11.1980.

AN ELEMENT OF THE MASTER PLAN OF
THE CITY & COUNTY OF SAN FRANCISCO